Chicago-Kent Law Review

Volume 61 | Issue 1 Article 5

January 1985

Can Good Medicine Be Bad Law

Chicago-Kent Law Review

CAN GOOD MEDICINE BE BAD LAW?

In re Haymer
115 Ill. App. 3d 349, 450 N.E.2d 940 (1983)

I. INTRODUCTION

A growing majority of states now recognize brain death as a legal definition of death.[1] Prior to *In re Haymer*,[2] the law of Illinois was silent as to when death occurred. The *Haymer* decision has now placed Illinois in the majority on the issue of defining death.

Under the common law, the absence of pulse, heartbeat, and breathing defined death.[3] Life support technology has made this approach inadequate.[4] Today, hearts can be restarted and breathing maintained mechanically; patients who once faced certain death now can be revived. Revival, however, may mean anything from complete recovery to permanent coma.

Medical developments have forced corresponding developments in the law. The status of victims of crimes, disease, and accidents who are dead by neurological standards, but living by the common law definition (due to technological support) has prompted both litigation and legislation.

Haymer is Illinois' first courtroom encounter with a conflict between the common law standard and modern medicine. This comment discusses the *Haymer* court's resolution of the conflict in favor of brain death, the propriety of judicial adoption of brain death, and its implications for future Illinois law.

II. HISTORY OF BRAIN DEATH

Medical Developments

By the late 1950's, life saving technology made it possible to maintain respiration artificially even if the patient was comatose and unable to

1. At least 34 states had adopted brain death in some form at the time of the decision in *In re* Haymer. *Haymer*, 115 Ill. App. 3d 349, 352, 450 N.E.2d 940, 943, 71 Ill. Dec. 252, 255 (1st Dist. 1983).

2. *Id.*

3. BLACK'S LAW DICTIONARY (5th ed. 1983) is the first edition to contain a brain death definition, based on non-vital sign criteria.

4. Research also continues on the use of artificial and animal organs in humans. *See Ethical Issues Debated After Successful Implant of Second Artificial Heart*, Amer. Med. News, Dec. 7, 1984, at 1, col. 3.

breathe spontaneously.[5] Medicine began to investigate new methods to ascertain death based on brain function[6] such as the electroencephalogram.[7] Other factors that hastened this investigation were increased activity in organ transplants,[8] the high cost of extraordinary life support,[9] and possibilities of physicians' criminal and civil liability.[10] A shift to neurological criteria meant more than a change in diagnostic technique. Because a premature brain death diagnosis is a self-fulfilling prophecy once life support is terminated and somatic (bodily) death occurs,[11] the need for accurate diagnosis was imperative.

The most important single event in the development of the medical definition of death was the publication of the *Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death*[12] ("Harvard Report"). The diagnostic criteria of the Harvard Report basically evaluated different types of involuntary reflexes. The Harvard Report was, and still is, very influential, but the criteria have been criticized[13] and the committee itself has been called "biased" and "paternalistic".[14] Other tests have been proposed in addition to the Harvard Report's criteria, such as angiography, ultrasound, arterial flow studies, and chemical body fluid tests.[15] Medical opinion clearly supports the validity of the brain death standard.[16] The lingering disputes concern which diagnostic criteria are the most reliable.

5. R. CONNELLY, LAST RIGHTS 36 (1982).

6. A paper published in 1902 may have been a forerunner of the brain death controversy. It reports a case of artificial respiration for 23 hours after the stoppage of spontaneous respiration. Cushing, *Some Experimental and Clinical Observations Concerning States of Increased Intracranial Tension*, 124 AM. J. MED. SCI. 375 (1902).

7. *See* Hamlin, *Life or Death by EEG*, 190 J. A.M.A. 112 (1964).

8. Proper care of the potential donor pool could create 10,000 donors per year. 3 M. HOUTS, I. HAUT, COURTROOM MEDICINE, *Death*, 1B-5 (1983). Such a large donor pool is an obvious incentive to improve transplant technology and increase the frequency of its application. Authority to declare death on cessation of brain function is almost essential to efficient transplant procedures.

9. The average cost to maintain a comatose patient is $600 to $1,000 per day. *Id.* at 1B-6.

10. Veith, *Special Communication: Brain Death*, 238 J.A.M.A. 1744 (1977).

11. Black, *Medical Progress: Brain Death (Part I)*, 299 N.E.J.M. 338, 339 (1978).

12. *Special Communication: A Definition of Irreversible Coma: Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death*, 205 J. A.M.A. 337 (1968).

13. van Till, *Diagnosis of Death in Comatose Patients Under Resuscitation Treatment: A Critical Review of the Harvard Report*, 2 AM. J. LAW. MED. 1:1 (1976).

14. R. CONNELLY, *supra*, note 5 at 41.

15. Angiography is a method of rendering blood vessels visible on X-ray film by injection of a radio-opaque material. BLACK'S MEDICAL DICTIONARY 50 (33rd ed. 1981). Many of the proposed tests are resisted by United States physicians because of the tests' invasive nature. Black, *supra*, note 11 at 342.

16. An editorial in the New England Journal of Medicine states "it is clear that a person is not dead *unless* his brain is dead." Sweet, *Brain Death*, 299 N.E.J.M. 410 (1978).

Brain Death and the Courts

In pre-brain death survivorship cases,[17] slight evidence of vital signs was sufficient to convince a court that one person predeceased another. In *Sauers v. Stolz*,[18] testimony that the husband had a slight heartbeat for a brief time after an auto accident and that blood was spurting from his head was enough to convince a court that he had "outlived" his wife, whose nostrils were filled with dust, indicating no breath had been taken after the accident. In *Vaegamast v. Hess*,[19] complicated medical evidence "proved" that a husband's heart stopped beating before his wife's when their car was struck by a train.[20] In *Smith v. Smith*,[21] an executor sought to bring a will under Arkansas' simultaneous death statute[22] by arguing that a woman's irreversible coma, caused by the same accident that killed her husband, was equivalent to death since she and her husband had both lost cognitive function at the same time.[23] The court rejected this assertion[24] in favor of the traditional definition of death which it quoted from *Black's Law Dictionary*.[25]

Court tests of the modern brain death concept have often involved a criminal defendant's theory that the physician is an intervening cause when respiration is terminated.[26] In *State v. Fierro*,[27] the court rejected a criminal defendant's appeal based on this argument.[28] The court held that removal of life support was not an alteration of the victim's natural progression after the shooting. Contemporary courts have uniformly rejected this form of challenge to brain death diagnoses.[29]

17. *See, e.g.*, Smith v. Smith, 229 Ark. 579, 317 S.W.2d 275 (1958); Thomas v. Anderson, 96 Colo. App. 2d 371, 215 P.2d 478 (1950); Vaegamast v. Hess, 203 Minn. 207, 280 N.W. 641 (1938).

18. 121 Colo. 456, 218 P.2d 741 (1950).

19. 203 Minn. 207, 280 N.W. 641 (1938).

20. *Vaegamast* reflects the single-minded emphasis once given to traditional vital signs. Medical testimony showed that the husband's spinal cord was severed on impact, and that heartbeat and respiration ceased within two minutes after that. The wife was thrown from the car and run over by the train, which crushed the top of her skull. A judgment that the husband died first was based on the fine medical distinction that the wife's heart probably continued to beat for a short time beyond her husband's death. *Id.* at 210, 280 N.W. at 643.

21. 229 Ark. 579, 317 S.W.2d 275 (1958).

22. ARK. STAT. ANN. § 61-124 (1980).

23. Given the state of medical technology at the time, it is doubtful that *Smith* was a case of brain death, but probably was one of persistent vegetative state, in which cognition is permanently lost, but spontaneous respiration continues. *See* In re Quinlan, 70 N.J. 10, 355 A.2d 647 (1976), *cert denied sub nom.*, Gorger v. N.J., 429 U.S. 922 (1977).

24. 229 Ark. at 580, 317 S.W.2d at 279.

25. *See supra* text accompanying note 3.

26. State v. Fierro, 124 Ariz. 182, 603 P.2d 74 (1979); State v. Meints, 212 Neb. 410, 322 N.W.2d 809 (1978); State v. Johnson, 56 Ohio St. 2d 35, 381 N.E.2d 637 (1978); State v. Brown, 8 Or. App. 72, 491 P.2d 1193 (1971); Cranmore v. State, 85 Wis. 2d 722, 271 N.W.2d 402 (1978).

27. 124 Ariz. 182, 603 P.2d 74 (1979).

28. *Id.* at 185, 603 P.2d at 77.

29. *Id.* Constitutionally based arguments against the application of brain death laws or defini-

Brain Death Legislation

Current brain death statutes[30] fall into three categories:[31] 1) some recognize both neurological and traditional signs of death; 2) some recognize brain death only when death cannot be ascertained by traditional means; and 3) some mandate brain death as the only criteria for death.[32] Existing brain death statutes have generally withstood court challenges,[33] but problems have arisen when a statute is confusing or poorly worded. Thus, in *State v. Robaczynski*,[34] a mistrial was declared when a jury was unable to reach a verdict in a case involving the Maryland brain death statute.[35] The apparent reason for the mistrial was the statute's use of the term "spontaneous brain function." The prosecution relied upon recorded brain activity to show the victim of an alleged murder was alive when the defendant nurse disconnected respiration without authority. The defense argued that the brain activity, elicited by external means, was not "spontaneous," therefore the state had failed to prove that the patient was alive at the time of the act.[36]

tions have also not been persuasive. An argument that judicial recognition of brain death had an "ex post facto" effect was rejected in Commonwealth v. Golston, 373 Mass. 249, 366 N.E.2d 744, *cert. denied*, 434 U.S. 1039 (1977). In People v. Vandeford, 77 Mich. App. 370, 258 N.W.2d 502 (1977), the argument that a brain death law was unconstitutionally vague was rejected. If the legislature has not already enacted a brain death law, generally the state's first exposure to a conflict in death standards is through a criminal defendant's appeal of brain death through decision or statute, or, as in *Haymer*, parent or guardian efforts to prevent termination of support after a brain death diagnosis.

30. ALA. CODE §§ 22-31-1 through 22-31-4 (Cum. Supp. 1979); ARK. STAT. ANN. §§ 82-537 through 82-539 (Supp. 1983); ALASKA STAT. § 09.65.120 (1983); CAL. HEALTH AND SAFETY CODE §§ 7180-7182 (Supp. 1984); COLO. REV. STAT. § 12-36-136 (1981); FLA. STAT. § 382.085 (1980); GA. CODE ANN. § 88-1716 (Cum. Supp. 1980); HAWAII REV. STAT. § 327 C-1 (Supp. 1979); I.C. § 54-1819 (Cum. Supp. 1981); IOWA CODE ANN. § 702.8 (1980); LA. REV. STAT. ANN. § 9:111 (Cum. Supp. 1983); MD. ANN. CODE HG 5-203 (1982); MICH. STAT. ANN. § 14.15 (1021-1024) (Cum. Callaghan Supp. 1981); MONT. REV. CODES ANN. 50-22-101 (1983); NEV. REV. STAT. § 451.007 (1979); N.M. STAT. ANN. § 12-2-4 (1978); N.C. GEN. STAT. § 90-323 (Cum. Supp. 1979); OHIO REV. CODE § 2108.30 (1984); OKLA. STAT. ANN. tit. 63 § 1-301(g) (Cum. Supp. 1981); OR. REV. STAT. § 146.001 (1981); TENN. CODE ANN. § 53-459 (Cum. Supp. 1980); TEX. REV. CIV. STAT. ANN. art. 4447t (Vernon Cum. Supp. 1985); VA. CODE § 54-325.7 (Cum. Supp. 1979); W. VA. CODE § 16-19-1 (1979); WYO. STAT. § 35-19.101 (Cum. Supp. 1979).

31. Of the various model and existing statutes, the text of the Uniform Determination of Death Act (*hereinafter UDDA*) has been given the broadest support: "An individual who has suffered either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain stem, is dead. A determination of death must be made in accordance with acceptable medical standards." 12 U.L.A. 237 (Cum. Supp. 1983).

32. Cook, *The Legal Implications of Brain Death*, 1 MED. LAW 135, 138 (1982).

33. *See supra* notes 26-29 and accompanying text.

34. No. 578-23001 (Criminal Court of Baltimore 1979) as discussed in DEFINING DEATH: A REPORT ON THE MEDICAL, LEGAL, AND ETHICAL ISSUES IN THE DETERMINATION OF DEATH: PRESIDENT'S COMMISSION FOR THE STUDY OF ETHICAL PROBLEMS OF MEDICINE AND BIOMEDICAL AND BEHAVIORAL RESEARCH, 139-40 (1981) (*hereinafter President's Commission*).

35. MD. ANN. CODE HG 5-203 (1982).

36. A living patient may yield a flat EEG, but certain external stimuli can elicit recordable neurological activity. If this is the case, a comatose patient may fully recover. M. HOUTS, *supra*

Robaczynski dealt with a statute that involved an ambiguous definition. Another problem of ambiguity occurs when brain death is incorporated into special purpose legislation. In *Bacchiochi v. Johnson Memorial Hospital*,[37] a doctor refused to terminate life support from a patient who was brain dead. The doctor feared criminal prosecution because the only expression of a brain death standard appeared in the state's organ transplant law[38] and the patient was not a potential organ donor. The case was resolved by an informal promise not to prosecute.[39] Both *Bacchiochi* and *Robaczynski* are representative of potential problems that can arise from poorly planned incorporations of brain death into statutory law.

III. Facts of the Haymer Case

On November 4, 1982, physicians at Loyola University of Chicago Hospital were authorized by court order to disconnect artificial life support systems sustaining the respiration of a seven-month-old infant, Alex B. Haymer. Physicians had determined on October 23, 1982 that the infant's total brain function had ceased.[40]

The parents opposed the order and a stay was granted pending an expedited appeal. Before the appeal was heard, the child's heart stopped functioning despite artificial support.[41] The issue contested on appeal was whether legal death occurred when the child's brain ceased functioning or when his heart stopped beating.

Even though the infant had died, the court declined to dismiss on the grounds of "technical mootness"[42] because of the important social nature of the case and because dismissal would not resolve the disputed date of death.[43] The court concluded that in addition to declarations of death made according to traditional vital signs, "a person who has sustained irreversible cessation of total brain function" can also be declared dead.[44] Therefore, either 1) irreversible cessation of total brain function or 2) irreversible cessation of respiratory function (both according to customary medical standards) is now the Illinois standard for determining

note 8 at 1B-08 and 1B-56. The status of such a patient may have been the issue in *Robaczynski*. *See President's Commission*, *supra* note 34 at 145.

37. As reported by Fabro, *Bacchiochi vs. Johnson Memorial Hospital*, 45 CONN. MED. 267 (1981), and Fabro, *The Bacchiochi Case—Continued*, 45 CONN. MED. 334 (1981).

38. CONN. GEN. STAT. ANN. § 19-139i(b) (1979).

39. *See supra*, note 37 at 335.

40. In re Haymer, 115 Ill. App. 3d 349, 350, 450 N.E.2d 940, 942, 71 Ill. Dec. 252, 254 (1st Cir. 1983).

41. *Id.*

42. *Id.* at 357, 450 N.E.2d at 946, 71 Ill. Dec. at 258.

43. *Id.*

44. *Id.* at 355, 450 N.E.2d at 945, 71 Ill. Dec. at 257.

death.[45] The court held that Alex Haymer died on October 23, the day of the brain death diagnosis.

IV. ANALYSIS

Opinion

The court's analysis began by noting that medical advances have rendered the "vital signs" definition of death inadequate in some situations. The court devoted more attention, however, to the propriety of judicial adoption of the brain death standard than to the medical evidence supporting the theory. The court emphasized two points to support judicial adoption of the brain death standard. First, the court found legislative support for the standard in the Uniform Anatomical Gift Act,[46] amended to include a brain death standard.[47] The court also pointed out that a substantial majority of states (at least 34 at the time of the opinion) had adopted brain death in some form.[48]

The court relied on the Washington case of *In re Welfare of Bowman*,[49] and the Colorado case of *Lovato v. District Court*,[50] two cases with fact patterns similar to *Haymer*, to reject the argument that the shift to brain death is one properly left to the legislators. Both *Bowman* and *Lovato* involved parent or guardian objections to termination of life support on children declared brain dead.

The *Haymer* court followed the *Bowman* court position that it is "appropriate and proper"[51] to decide the question of whether brain death is valid in the face of a lack of statutory guidance.[52] The *Haymer* court also followed *Lovato* in recognizing the authority of the legislature to resolve the brain death issue, but that the court nonetheless has the "duty" to be responsive to the recent generation of medical advances that has made the common law definition of death obsolete.[53]

The *Haymer* court drew its mandate to reform Illinois law from *Alvis v. Ribar*.[54] In *Alvis*, the Illinois Supreme Court abandoned the doctrine of contributory negligence as a defense in tort actions, and adopted

45. 115 Ill. App. 3d at 356, 450 N.E.2d at 945, 71 Ill. Dec. at 257.
46. ILL. REV. STAT. ch. 110 1/2, par. 302(b) (1981).
47. In re Haymer, 115 Ill. App. 3d at 354, 450 N.E.2d at 943, 71 Ill. Dec. at 257.
48. *Id.*
49. 94 Wash. 2d 407, 617 P.2d 731 (1980).
50. 198 Colo. 419, 601 P.2d 1072 (1979).
51. 115 Ill. App. 3d at 353, 450 N.E.2d at 944, 71 Ill. Dec. at 256 (*quoting Bowman*, 94 Wash.2d 406, 420, 617 P.2d at 738).
52. *Id.*
53. *Id. (quoting Lovato, supra* note 50).
54. 85 Ill. 2d 1, 421 N.E.2d 886, 52 Ill. Dec. 23 (1981).

instead the doctrine of comparative negligence. The *Haymer* court uses the language of *Alvis* to support the position that when the legislature has failed to remedy a gap in the common law, it is "imperative" that the judiciary act to do so.[55]

Alvis, however, is not as unilaterally supportive of judicial reform as *Haymer* would suggest. There were two dissents in *Alvis*, each emphasizing that a shift to comparative negligence was one better left to the legislature.[56] Judicial reform was more appropriate in *Alvis* than in *Haymer*, because contributory negligence was a doctrine of judicial creation[57] and already riddled with exceptions.[58] Also, because there were alternative forms of comparative negligence[59] available, the *Alvis* dissents argued that the legislative branch is best equipped to make a choice.[60] A similar argument could be made for leaving to the legislature the selection of which type of brain death standard to follow, especially in such a factually complex area of law.

The *Haymer* court emphasized that Illinois lawmakers supported brain death through the Uniform Anatomical Gift Act.[61] *Alvis* was also confronted with legislative intent expressed in a statute, but reached a different conclusion than did *Haymer*. In *Alvis*, the party arguing against adoption of comparative negligence relied on the presence of contributory negligence in several statutes to support the theory that the legislature intended to retain contributory negligence.[62] The *Alvis* court rejected this argument, stating that the statutes were only legislative restatements of the then-existing law as expressed by the court.[63] This kind of narrow reading applied to *Haymer* could have supported a finding that the legislature was expressly limiting brain death applications to transplant cases.[64]

The *Haymer* decision adopts a brain death standard basically identi-

55. 115 Ill. App. 3d at 353, 450 N.E.2d at 944, 71 Ill. Dec. at 256.

56. 85 Ill. 2d at 29, 35 N.E.2d at 898, 901, 71 Ill. Dec. at 35, 38.

57. Butterfield v. Forrester, 11 East 60, 103 Eng. Rep. 926 (1809).

58. Exceptions based on "wanton" conduct, statutes to protect plaintiffs, and "last clear chance" are discussed in *Alvis*, 85 Ill. 2d at 10, 421 N.E.2d 890, 71 Ill. Dec. at 27.

59. "Pure" comparative negligence is differentiated from "modified" comparative negligence in *Alvis*, 85 Ill.2d at 25, 421 N.E.2d at 597, 74 Ill. Dec. at 34.

60. *See* 85 Ill. 2d at 29, 421 N.E.2d at 899, 71 Ill. Dec. at 35 (Underwood, J., dissenting).

61. *See supra* note 46.

62. *Alvis*, 85 Ill. 2d at 23, 421 N.E.2d at 896, 71 Ill. Dec. at 33.

63. *Id.*

64. With respect to the inclusion of the brain death standard in the Uniform Anatomical Gift Act, *supra* note 46, the Illinois Catholic Conference said "Great caution must . . . be exercised in interpreting the present legal definition of death for transplant purposes already written into the Illinois Anatomical Gift Act. Watchful care is needed to block its extension into other areas." Pamphlet, ON DEATH AND DYING: A STATEMENT OF THE ILLINOIS CATHOLIC CONFERENCE (Approved Mar. 11, 1978).

cal to that used in the Uniform Determination of Death Act.[65] Thus, in Illinois, a person will now be considered dead for all legal purposes if there is a diagnosis of total, irreversible cessation of brain activity or total, irreversible cessation of all circulatory and respiratory function. Either diagnosis must be according to customary standards of medical practice.[66]

The practical effect of *Haymer* is to remove physicians who make valid brain death diagnoses from potential liability. *Haymer* also eliminates many proof of death problems. Complicated inquiries to determine the moment of cessation of heart function are no longer needed.[67] Establishing that a certain injury was the cause of brain death should be enough in many cases to establish the "moment" or cause of death.[68]

Since *Haymer* follows the text of the UDDA, it implicitly acquires broad support.[69] The language of *Haymer* is also clear enough to avoid problems of construction such as those in *Robaczynski* and *Bacchiochi*.[70] *Haymer* also stops short of prescribing rigid medical criteria that can be subject to rapid change.[71]

Potential Problems of Interpretation

The problem caused by strict reliance on traditional signs of death are clear. A shift to the brain death standard, however, can create new problems. Adoption of any standard based upon interpretations of contemporary technology introduces existing and potential problems that accompany the development of that technology. Many of the difficulties associated with brain death are intentionally outside of the scope of the UDDA.[72]

65. *See supra* note 31.

66. 115 Ill. App. 3d at 356, 450 N.E.2d at 945, 71 Ill. Dec. at 257.

67. *See supra* text accompanying notes 17-23.

68. In Woodward v. Blythe, 249 Ark. 793, 439 S.W.2d 919 (1969), a wrongful death suit was brought against two drivers involved in an auto accident. The plaintiff's decedent was killed when his car was struck head on by the first defendant's car, then struck in the rear by the second defendant's car. The only medical evidence of death presented was the coroner's report listing "Brain injury and Internal Injuries" from a head on collision as cause of death. A judgment for the plaintiff was reversed and a new trial was granted to determine which collision caused death. Given the precision of the science of forensic pathology, an inquiry into the cause of death could be simplified by ascertaining which impact delivered the injury causing brain death.

69. *See supra* note 31.

70. *See supra* text accompanying notes 34-39.

71. In an environment of rapidly changing medical technology, legislative endorsement of specific diagnositic procedures will result either in a need for constant amendments or continued variances between law and technology. National, provincial or territorial brain death laws describing specific medical measures are in effect in Argentina, Australia, Canada, Czechoslovakia, Finland and France. *See President's Commission, supra* note 34 at 147-58.

72. John M. McCabe, Legislative Director of the National Conference of Commissioners on

One possible problem relates to the present technological ability to keep a body functioning for an extended period after a declaration of brain death. Depending on which criteria are applied, this time may range from days to months.[73] In the case of a brain-dead expectant mother, for example, the body can be kept alive until the fetus reaches viability.[74] It is possible that a future court will be faced with balancing the interests of the state in a potentially viable fetus[75] with the interests of the mother's family or husband who may oppose continued respiration.

Another consideration is whether the need for organ donors will encourage hasty declarations of brain death, or whether there will be a trend to prolonged life support after declarations of death for transplant purposes.[76] The best method of organ preservation is, of course, within a "living" human body.[77] A diagnosis of brain death "early enough in the dying process" can prevent "unnecessary deterioration of organs".[78] Taken to extremes, this raises the possibility of the "bioemporium" where "neomorts" are sustained mechanically.[79] Bodies artificially maintained could provide a continuous source of organs, antibodies, and blood, as well as being used for experimentation.[80] If this concept is currently unacceptable, as the average age of our population and average life expectancies both increase,[81] attitudes could change. The court may

Uniform State Laws, said the UDDA, *supra* note 28, "does not deal with individual liability of physicians . . . living wills, death with dignity, euthanasia, life support beyond brain death in pregnant women or organ donors, and protection of dead bodies." McCabe, *The New Determination of Death Act*, 67 A.B.A. J. 1476, 1478 (1981).

73. Black, *supra* note 11 at 339.

74. Dillon, *Life Support and Maternal Brain Death During Pregnancy*, 248 J. A.M.A. 1089 (1982).

75. *See* Roe v. Wade, 410 U.S. 113, 150 (1973).

76. Even though many states provide a review system for declaring death in transplant-donor cases (*see, e.g.*, Ala. Code § 22-31-3(a) (Cum. Supp. 1979)) these procedures may not prevent an erosion to less rigid diagnostic criteria under the pressure of meeting increasing organ donation needs. There are other factors to consider, as well. For example, one of the first cases to deal directly with brain death was Tucker v. Lower, as discussed in R. CONNELL, *supra*, note 5, at 37. In *Tucker*, a wrongful death suit was brought against physicians who terminated life support on a brain-dead patient for organ donation purposes. The suit was brought by the patient's brother. The physicians did not contact the brother even though the patient had his brother's business card on his person when admitted through hospital emergency.

77. Cryopreservation (low temperature storage) is a promising technology for future long-term (weeks to years) storage of massive human organs, especially kidneys. KAROW, ORGAN PRESERVATION FOR TRANSPLANTATION, 517-544 (2d ed. 1981).

78. R. CONNELLY, *supra* note 5 at 43.

79. W. Gaylin, *Harvesting the Dead*, 249 Harper's 23 (1974).

80. *Id.* at 26-28.

81. The burden on the health care industry will increase at the turn of the century when the number of Americans over the age of 85 will increase by 300% over 1978 figures. *Elderly Boom at Turn of Century*, Chi. Trib., Feb. 5, 1984, § 6, at 7, col. 1. Presently, 21% of the U.S. population is between 40 and 60. *Entering Middle Age: What to Do With the Rest of Your Life?* Chi. Trib., Feb. 5, 1984, § 2, at 1, col. 1.

someday be asked to rule on the acceptable duration of body support for transplant purposes.[82]

Application

In addition to the potential problems discussed earlier in the application of a brain death standard, other problems exist that can arise today. The most serious problem in using the brain death standard is in deciding at what point the diagnosis should be made, since brain death does not actually occur at a "moment" but is rather a process.[83] The following hypothetical illustrates how the application of brain death can lead to ambiguous results: December 1: Patient admitted through the emergency ward with severe head injuries and no vital signs; preliminary examination indicates possible brain death; December 2: Comprehensive clinical and laboratory tests show probable brain death; December 3: A confirmatory EEG shows no sign of brain activity; December 4: Physicians terminate life support at 11:58 PM; December 5: Patient breathes without assistance for a few moments after termination of life support (not uncommon in brain death) but spontaneous respiration premanently ceases at 12:04 AM, December 6.

Assuming no formal declaration of death was made during this process,[84] when did the patient die? An autopsy could support a finding of death on admission, December 1; greater weight could be given to comprehensive tests administered on December 2; most laws and criteria require a confirmatory EEG,[85] so death could be declared on December 3; it could be argued that the onset of death was at termination of respiration, December 4; death could also have been "pronounced" with cessation of spontaneous respiration on December 5. Such a determination is of particular importance in criminal proceedings, insurance cases, inheritance cases or malpractice, where time of death may be a critical element.

Problems of interpretation of a UDDA-type standard are evident in the recent case of *State v. Long*.[86] In *Long*, the defendant was accused of aggravated vehicular homicide and several traffic violations after his in-

82. The court plays a necessary role in the determination of these conflicts. There are advantages in the judicial process not available in medical judgment. Judicial review is public, adversarial and impartial, and the decisions are stated on principles of law. *See* Baron, *Medical Paternalism and the Rule of Law: A Reply to Dr. Relman*, 4 AM. J. LAW MED. 337 (1979).

83. *See* People v. Bonilla, 95 A.D.2d 396, 423-24, 467 N.Y.S.2d 599, 616 (1983).

84. *Haymer* permits a declaration of death based on brain activity, but does not expressly state when that declaration should be made. *Haymer*, 115 Ill. App. 3d 349, 450 N.E.2d 940, 71 Ill. Dec. 252 (1983).

85. *See, e.g.*, the *Harvard Criteria, supra*, note 12.

86. 7 Ohio App. 3d 248, 455 N.E.2d 534 (1983).

volvement in an auto accident that injured one child and killed another.[87]

The accident occurred on December 3, 1981. One of the victims, 11-year-old Steven Brown, was admitted that day to the hospital with no vital signs; respiration was chemically induced and artificially maintained.[88] On December 4, defendant pled guilty to the traffic charges. Respiration on the boy was discontinued on December 7 after a diagnosis of brain death. Defendant was indicted for manslaughter on December 23. He was convicted, and the conviction was affirmed.

On appeal the defendant made a double-jeopardy argument, based on his indictment for manslaughter subsequent to his guilty pleas for the traffic offenses.[89] It was essential to the defendant's argument that the victim be found dead on December 3, before defendant entered his pleas. The *Long* court rejected this assumption of death, stating that the "fundamental fact" underlying the manslaughter charge, the death of the victim, had not occurred until December 7, after defendant had entered his pleas.[90]

The *Long* court relied on a definition of brain death substantially the same as that in *Haymer* and the UDDA, but did not interpret that definition as did the *Haymer* court. Alex Haymer's death was diagnosed on October 23; respiration would have been terminated (had there been no stay) on November 4. *Haymer* held that the date of death was the date of the diagnosis, October 23.[91] Steven Brown was pronounced dead on December 7 and respiration was discontinued. The essential difference between these two cases is that in *Haymer*, the date of death was the date of diagnosis. In *Long*, the actual pronouncement of death controlled. Under *Long*'s interpretation, Alex Haymer's status from October 23 to November 4 would be undefined, while under *Haymer*, the defendant in *Long* may have been able to introduce evidence to support a date of death prior to termination of respiration.

Another problem in applying a brain death standard in Illinois is whether the *Haymer* decision will have any substantial effect at all. A recent survey based on the *Bowman* case provides a good example.[92] The *Bowman* ruling was in 1980. A telephone survey of Washington hospitals was conducted three years later to determine whether hospitals had

87. 7 Ohio App. 3d at 248, 455 N.E.2d at 535.

88. *Id.*

89. *Id.*

90. 7 Ohio App. 3d at 250, 455 N.E.2d at 536. The case applied the Ohio brain death law, OHIO REV. CODE § 2801.30 (1983).

91. *See* text accompanying notes 40-41.

92. Tyler & Robertson, *Impact of Brain Death Ruling in Washington State*, 140 West. J. Med. 625 (1984).

altered their practices in light of the new standard.[93]

The results of the survey indicate that *Bowman* has had little effect on actual medical practice. While 77% of the surveyed hospitals differentiated cases of brain death from irreversible coma, the remainder made no distinction at all.[94] No review is required of a brain death determination in 85% of the hospitals.[95] Significantly, 43% of the surveyed hospitals were unfamiliar with the *Bowman* decision, and 40% of the hospitals familiar with the decision were unfamiliar with its details.[96] It seems unlikely that an Illinois survey would produce results different from those of the Washington survey.[97]

Problems in applying a brain death standard will emerge as technology advances. Methods of reliable brain death diagnosis will probably improve.[98] Another developing technology is brain restoration.[99] If progress in both areas continue, doctors may soon be forced to choose between brain restoration and organ transplant. Increased organ transplant activity will probably also make the application of the brain death standard more frequent, with more opportunities for unexpected conflict.

Alternatives to Judicial Enactment

Two New York cases indicate that *Haymer* could have determined the issue before it without resorting to judicial enactment of brain death legislation. In *NYC Health and Hospitals Corp. v. Sulsona*[100] and *People*

93. Questions were addressed to "knowledgeable persons" at the hospitals. Some of the questions included "Have any formal criteria been developed by the hospital to be used to determine brain death?" and "Has this topic caused significant problems at your hospital?" *Id.*

94. 91% of surveyed hospitals make no distinction between brain death and persistent vegetative state. *Id.* at 626.

95. *Id.*

96. *Id.*

97. Telephone calls made by the author in October, 1984, to the Chicago Hospital Council and the Illinois State Medical Society revealed that these associations had not issued any statements or proposed directives since *Haymer*.

98. Current brain death diagnostic technology was recently almost tragically misapplied. Alan Supergan, a 20 year old man, was involved in an auto accident and suffered severe brain damage. He was pronounced dead by a neurosurgeon when no brain activity was detected. Family members consented to organ donation. Supergan coughed as he was being prepared for kidney removal. He was returned to life support, but suffered irreversible heart failure three days later. *Patient Who Came Back to Life Dies*, Chi. Trib., Feb. 12, 1984, § 4, at 8, col. 1.

99. Brain tissue transplantation was once believed impossible, but recent research is promising. *See Brain-Tissue Transplants?* 91 Sci. Dig. 7:85 (1983) and *Brain Tissue Transplants—From Science Fiction to Fact*, 101 New Scientist 1395:21 (1984). There are indications that fetal brain cells may be most adaptable to transplant. *Id.* The implications of this new technology are especially serious in the case of patients like Alan Supergan, *supra*, note 98.

100. 81 Misc. 2d 1002, 367 N.Y.S.2d 686 (1975).

v. Bonilla,[101] the courts of New York were asked to make brain death determinations. Each court declined to give holdings broad enough to be considered new definitions of death for New York law.

In *Sulsona*, a hospital sought declaratory judgment to define death.[102] Hospital physicians, apprehensive of criminal liability, refused to terminate life support on a patient who was brain dead, and genetically matched for kidney transplant.[103] The court did not provide the hospital with the definition it sought, but held that the word "death" as used in the New York organ transplant law[104] suggested a legislative intent to conform the law with customary medical practice in defining death.[105] While this decision implicitly recognized brain death, it did not have the effect of permanently changing New York law to a brain death standard.[106]

The definition of death was again at issue in the *Bonilla* case. The trial court had rejected defendant's request for instructions on *both* brain death and common law death; the failure to give these definitions to the jury was the basis for his appeal of a manslaughter conviction.[107] The conviction was affirmed on the basis of the judge's "very thorough instructions" that enabled the jury to decide whether the defendant's actions had caused the victim's death.[108] Even though there was a majority opinion, a concurrence, and two dissents, there was total agreement that the decision should be made upon the facts of the case without reliance upon a judicially-enacted definition of death. After considering the complicated factual nature of the question, and the shifting nature of medical technology, the court felt that such a change was more appropriate for the lawmakers.[109]

Haymer could have taken an approach similar to *Sulsona* and *Bonilla*. Extensive expert testimony[110] was presented in *Haymer* to sup-

101. 95 A.D.2d 396, 467 N.Y.S.2d 599 (1983).

102. 81 Misc. 2d at 1003, 367 N.Y.S.2d at 687.

103. *Id.* The brain-dead patient eventually suffered permanent cardiac arrest and the transplant did not take place.

104. N.Y. PUB. HLTH. LAW § 4300 *et seq.* (1983).

105. 81 Misc. 2d at 1007, 367 N.Y.S.2d at 691.

106. *See also* Cranmore v. State, 85 Wis. 2d 722, 271 N.W.2d 402 (1978).

107. *Bonilla*, 95 A.D.2d at 430-31, 467 N.Y.S.2d at 619 (Titone, J., dissenting).

108. *Id.* at 412, 467 N.Y.S.2d at 610 (Titone, J., dissenting).

109. *Id.* at 424-26, 467 N.Y.S.2d at 616-18. The New York Court of Appeals recently affirmed *Bonilla* and another case. The court held that brain death was acceptable as a legal definition of death. This decision does not discredit the approaches used in *Sulsona* and *Bonilla* to resolve the death question without resorting to judicial enactment of brain death legislation. *See* People v. Eulo, 63 N.Y.2d 341, 482 N.Y.S.2d 436 (1984).

110. 115 Ill. App. 3d at 356, 450 N.E.2d at 946, 71 Ill. Dec. at 258.

port the brain death determination. Principles of judicial notice[111] would have enabled the appellate court to accept a brain death determination even though the lower court had not directly addressed the issue.[112] In this way, *Haymer* could have served as precedent for allowing introduction of neurological evidence of death without performing a legislative function. Unfortunately, the *Haymer* adoption of the UDDA combined with the existence of the Uniform Anatomical Gift Act may deter supplemental legislation that could anticipate situations more factually complex than *Haymer*.[113] In all likelihood, as technology advances, the question of when death occurs will continue to create confusion and produce non-uniform results.

V. CONCLUSION

Exclusive adherence to the common law definition of death can lead to judicial determinations at variance with current medical practice. By placing Illinois in the mainstream of states recognizing brain death in some form, *Haymer* helps to avoid some of these results.

However, *Haymer* fails to sufficiently recognize or deal with the problems that will inevitably arise from application of a new standard based entirely on contemporary technology. The *Haymer* opinion could have been more narrowly worded to avoid the effect of judicial enactment of a brain death definition. The brain death issue is a factually complicated one, and has broad implications. Needed legislative attention may actually be discouraged by the *Haymer* decision.

111. *See* Wheeler v. Aetna Cas. & Sur. Co., 11 Ill. App. 3d 841, 298 N.E.2d 329 (1973), *vacated on other grounds*, 57 Ill. 2d 104, 311 N.E.2d 134 (1974).

112. *Id.* at 854, 298 N.E.2d at 338.

113. Other significant judicial departures from common law that have not been followed by needed legislative clarification include *Alvis, supra*, note 54 and Spring v. Little, 50 Ill. 2d 351, 280 N.E.2d 208 (1972), in which Illinois judicially adopted the doctrine of implied fitness of leased premises.